

DEPARTMENT of ENVIRONMENTAL SERVICES  
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: ADAMS POND	Lake Area (ha): 8.26
Town: BARNSTEAD	Maximum depth (m): 10.7
County: Belknap	Mean depth (m): 4.3
River Basin: Merrimack	Volume (m <sup>3</sup> ): 353000
Latitude: 43°17'15" N	Relative depth: 3.3
Longitude: 71°14'15" W	Shore configuration: 1.37
Elevation (ft): 665	Areal water load (m/yr): 3.15
Shore length (m): 1400	Flushing rate (yr <sup>-1</sup> ): 0.70
Watershed area (ha): 49.2	P retention coeff.: 0.74
% watershed ponded: 0.0	Lake type: natural w/dam

BIOLOGICAL:

23 February 1989

8 August 1988

DOM. PHYTOPLANKTON (% TOTAL) #1	DINOBYRON 45%	STAUSTRUM 55%
#2	RHIZOSOLENIA 35%	CHRYSPHAERELLA 10%
#3	SYNURA 20%	PERIDINIUM 15%
PHYTOPLANKTON ABUNDANCE (cells/mL)		690.0
CHLOROPHYLL-A (µg/L)		5.44
DOM. ZOOPLANKTON (% TOTAL) #1	KERATELLA 45%	NAUPLIUS LARVA 33%
#2	CILIATE SPP. 17%	CYCLOPOID COPEPOD 17%
#3	POLYARTHRA 9%	KERATELLA 11%
ROTIFERS/LITER	92	37
MICROCRUSTACEA/LITER	15	96
ZOOPLANKTON ABUNDANCE (#/L)	129	133
VASCULAR PLANT ABUNDANCE		Sparse
SECCHI DISK TRANSPARENCY (m)		3.5
BOTTOM DISSOLVED OXYGEN (mg/L)	3.6	
BACTERIA (fecal col., #/100 ml) #1		< 10
#2		
#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 4.0  
Hypolimnion volume (m<sup>3</sup>): 39500

CHEMICAL:		Lake: ADAMS POND Town: BARNSTEAD				
	23 February 1989		8 August 1988			
DEPTH (m)	3.0	6.0	2.0	5.0	9.0	
pH (units)	6.3	6.2	6.7	6.2	6.0	
A.N.C. (Alkalinity)	4.6	4.6	4.3	4.4	7.7	
NITRATE NITROGEN	< 0.05	< 0.05	< 0.05		< 0.05	
TOTAL KJELDAHL NITROGEN	0.11	< 0.10	0.49	0.54	0.84	
TOTAL PHOSPHORUS	0.015	0.012	0.009	0.012	0.036	
CONDUCTIVITY ( $\mu$ mhos/cm)	27.0	26.9	22.9	23.3	29.5	
APPARENT COLOR (cpu)	17	17	25	30	80	
MAGNESIUM			0.44			
CALCIUM			1.4			
SODIUM			1.9			
POTASSIUM			0.30			
CHLORIDE	< 2	< 2	< 2		< 2	
SULFATE	3	4	3		3	
TN : TP	7		54		23	
CALCITE SATURATION INDEX			3.8			
All results in mg/L unless indicated otherwise						
TROPHIC CLASSIFICATION: 1988						
	D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
	**	2	0	1	3	N/C
COMMENTS:						
<p>1. No dissolved oxygen values were determined during the summer survey because of a faulty probe. If the zero dissolved oxygen value determined by a 1952 Fish and Game survey is used, the pond would receive 6 trophic points for dissolved oxygen and a total of 9 trophic points (Mesotrophic).</p> <p>2. Boat was launched at a gravel overflow area near the dam. Water was shallow at the launch site and parking was limited, but the site is open to the public.</p> <p>3. The whole-water phytoplankton was dominated by <u>Chroomonas</u> (45%) and tiny green flagellates (15%). Cryptomonads (50%) and greens (30%) were the dominant algae classes.</p>						

# FIELD DATA SHEET

LAKE: ADAMS POND TOWN: BARNSTEAD  
DATE: 08/08/88 WEATHER: CLEAR & WARM

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[illegible]

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SECCHI DISK (m):    3.5                COMMENTS:  No dissolved oxygen values
                                           are listed because the D.O. probe
BOTTOM DEPTH (m):   10.5                was not functioning properly.

TIME:  1210

*Dissolved oxygen values are in mg/L
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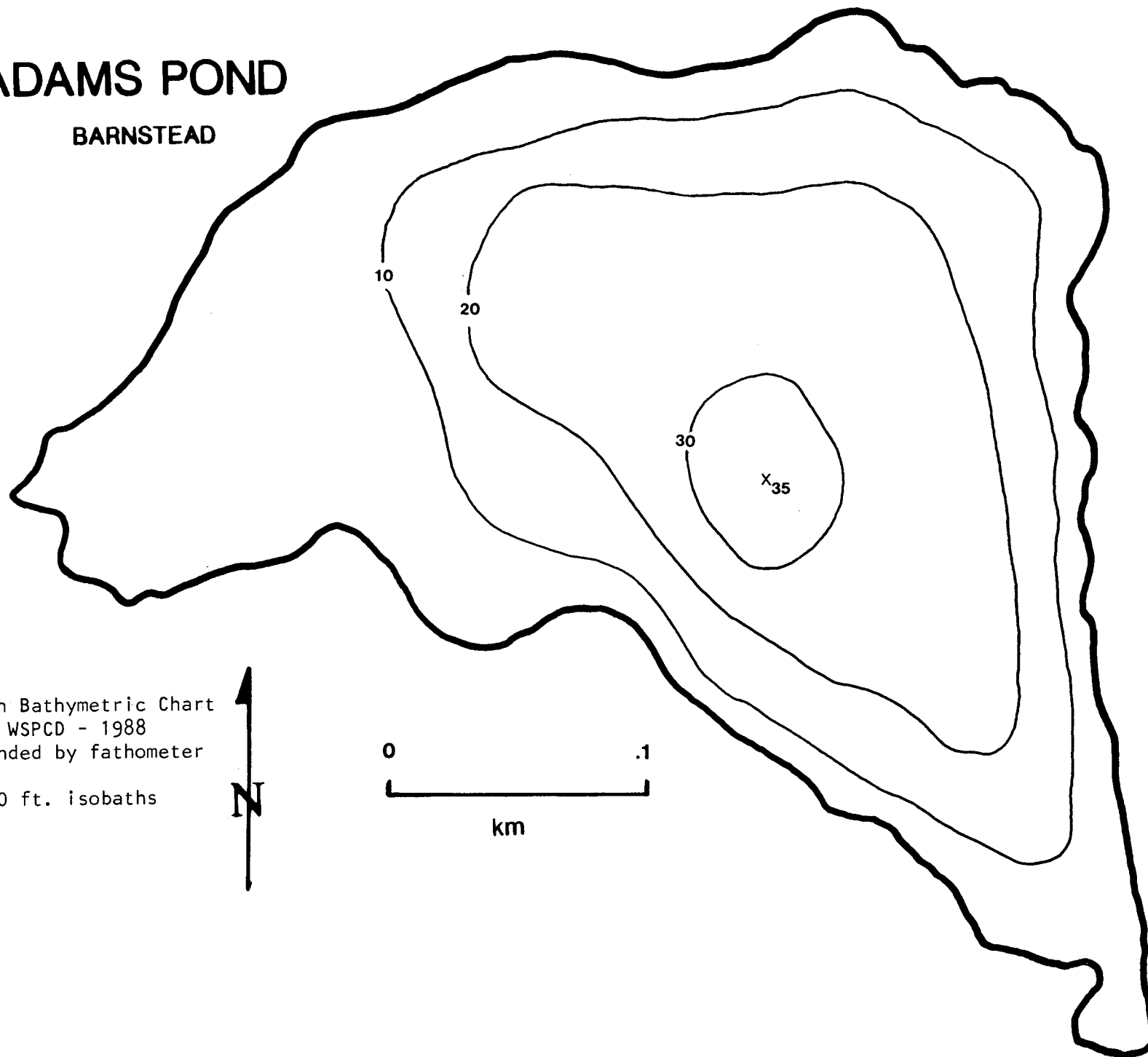
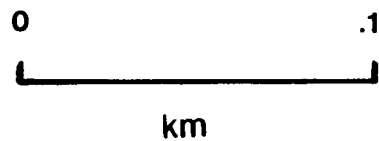
# ADAMS POND

BARNSTEAD

111-4

Rough Bathymetric Chart  
WSPCD - 1988  
sounded by fathometer

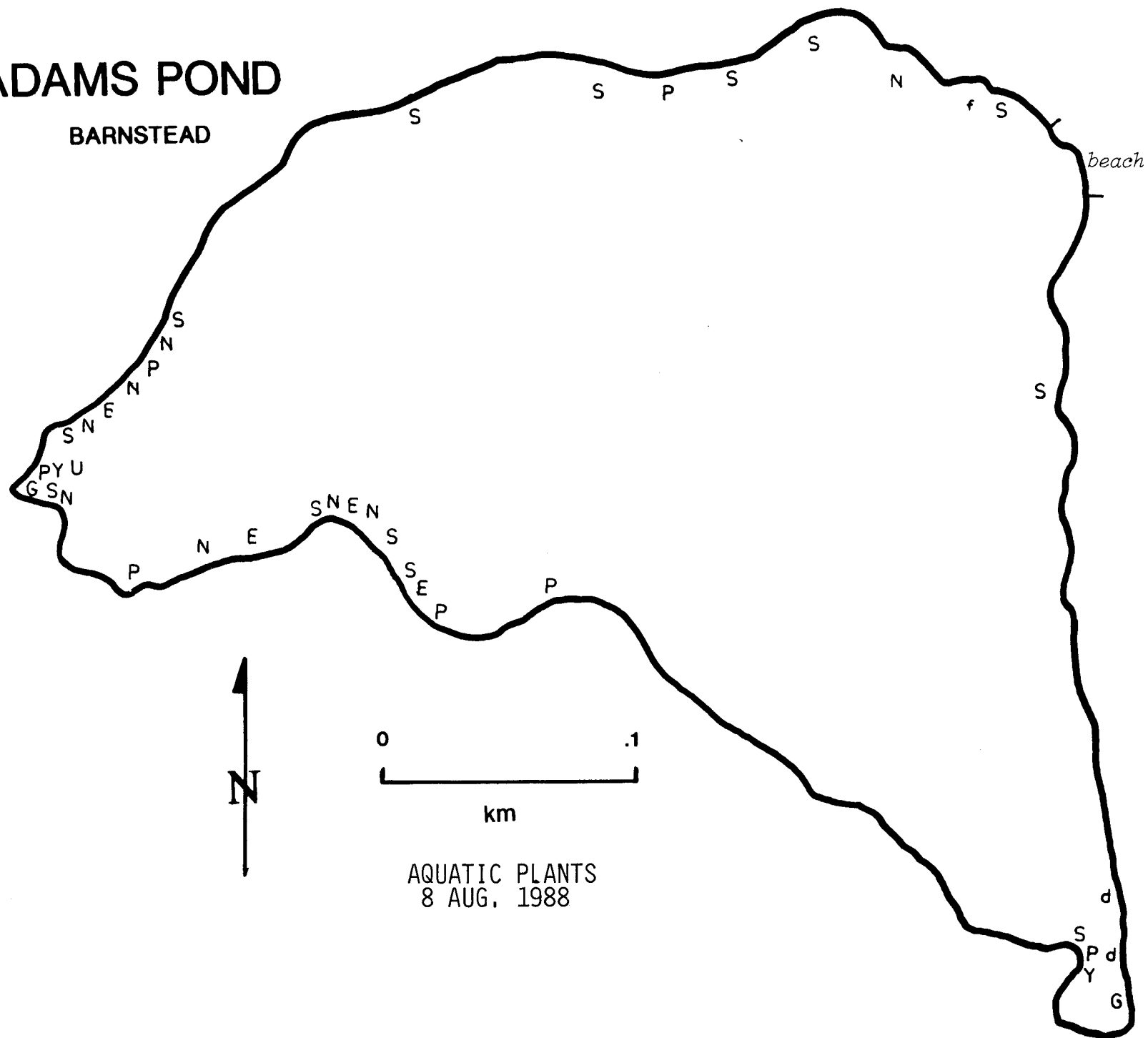
10 ft. isobaths



# ADAMS POND

BARNSTEAD

111-6



## AQUATIC PLANT SURVEY

LAKE: ADAMS POND

TOWN: BARNSTEAD

DATE: 08/08/88

[illegible]

OVERALL ABUNDANCE: Sparse

GENERAL OBSERVATIONS:

1. Large Rhododendron plants were along part of the southern shoreline.
2. Much of the shoreline is owned by a Boy Scout Camp. Many tent sites were observed.